Operating and Service Manual

MODEL

DC7144A

PART NUMBER

1012876-501

SERIAL NUMBER

311379

AMPLIFIER RESEARCH®
Souderton, PA 18964-9990 USA
TEL (215) 723-8181 FAX (215) 723-5688 www.amplifiers.com

MP MASTER
MA34433

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OPERATING INSTRUCTIONS

MODEL DC7144A

WARNING:

**DO NOT EXCEED MAXIMUM POWER RATINGS. DO NOT DROP.
INTERNAL COMPONENTS ARE FRAGILE.**

Operation of the Model DC7144A is quite simple. The input signal is fed into the N male connector (J1) and the output is taken from the N female connector (J2).

Forward coupled output is taken from jack (J3) and reverse coupled output is taken from jack (J4). Both coupled output jacks on the unit are Type "N" (Female).

See Specification Sheet for detailed specifications.

AMPLIFIER RESEARCH
160 School House Road, Souderton, PA 18964-9990 USA
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MODEL DC7144A
MODEL DC7144
M1
Dual Directional Coupler
400 Watts CW
0.8-4.2GHz

The Model DC7144A is a dual directional coupler with excellent frequency range and power handling capability. The wide range assures flexibility in coupling medium power amplifiers to oscilloscopes, voltmeters, power meters, spectrum analyzers and other measuring instruments. The dual directional design allows the user to monitor both forward and reflected power, a much needed characteristic in RF susceptibility testing for amplifier overdrive protection, field control and load protection. Low insertion loss allows efficient coupling to the load.

The Model DC7144A is uniquely suited for use with our "S" series microwave power amplifiers, other amplifiers operating within this frequency and power range, and our PM2002 power meter.

SPECIFICATIONS
Model DC7144A

FREQUENCY RANGE ..... *0.8 - 4.2GHz*

POWER (Maximum Watts) ..... *400 Watts CW*
4K Watts Peak, @ 5% duty cycle,
30 μsec pulse

COUPLING FACTOR ..... *40 dB ±1.3 dB (includes flatness)*

FLATNESS ..... *±0.8dB*

DIRECTIVITY
Typical ..... *19 dB*
Minimum ..... *15 dB*

INSERTION LOSS ..... *0.4 dB maximum*

IMPEDANCE (Main Line) ..... *50 ohms, VSWR 1.25:1 maximum*

CONNECTORS
Main Line ..... *See Model Configuration*
Coupled ..... *See Model Configuration*

WEIGHT ..... *0.24 kg (.525 lbs)*

SIZE (WxHxD) ..... *2.35 x 5.84 x 19.0 cm*
0.925 x 2.3 x 7.48 in

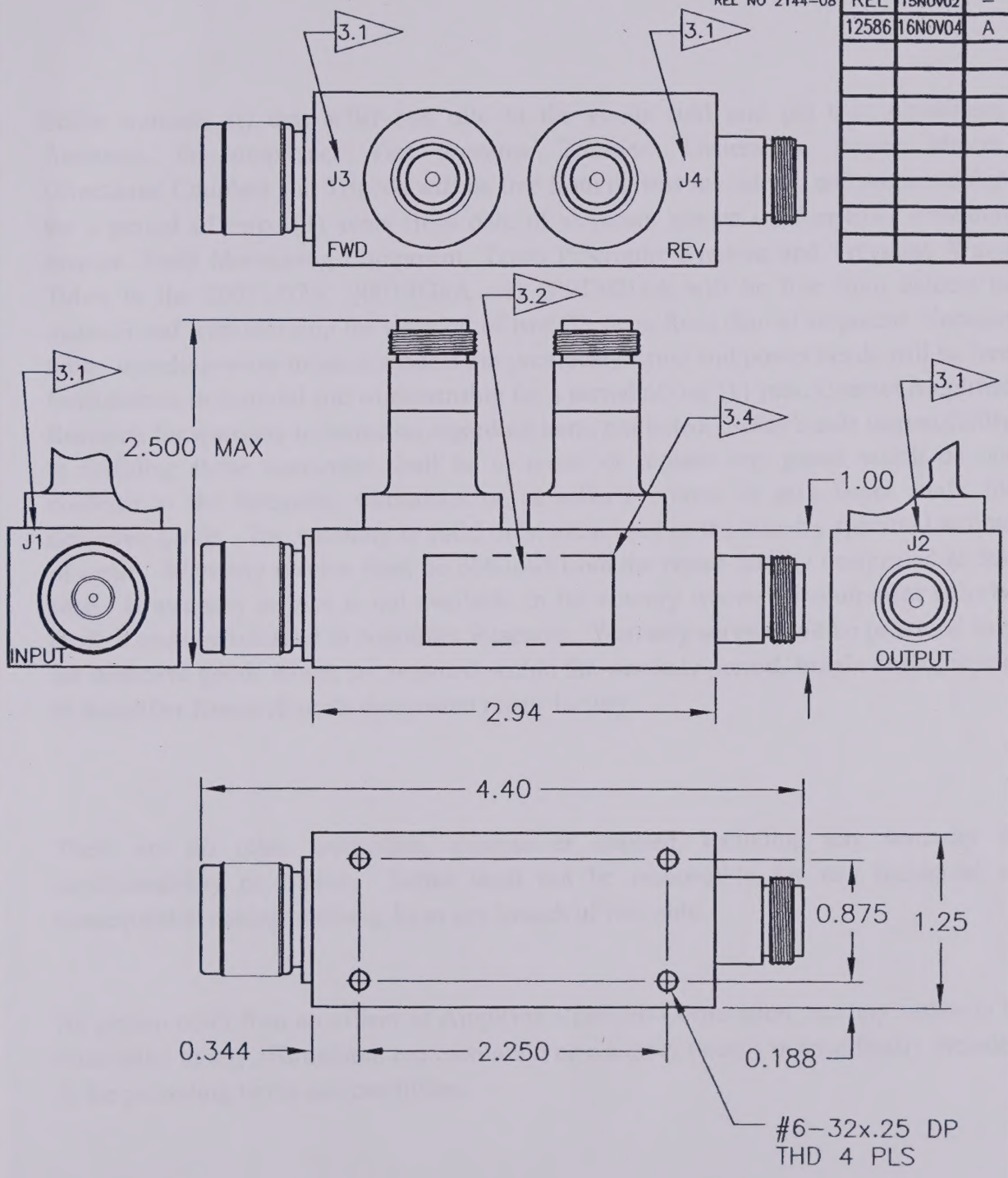
Model Configuration

Model Number	*Main Line J1/J2*	*Coupled Connector J3/J4*
DC7144A	*N(M)/N(F)*	*N(F)/N(F)*
DC7144	*N(F)/N(F)*	*SMA(F)/SMA(F)*
DC7144M1	*N(F)(NF)*	*N(F)/N(F)*

REV051702

ECN	DATE	REV
REL	15NOV02	–
12586	16NOV04	A

REL NO 2144-08



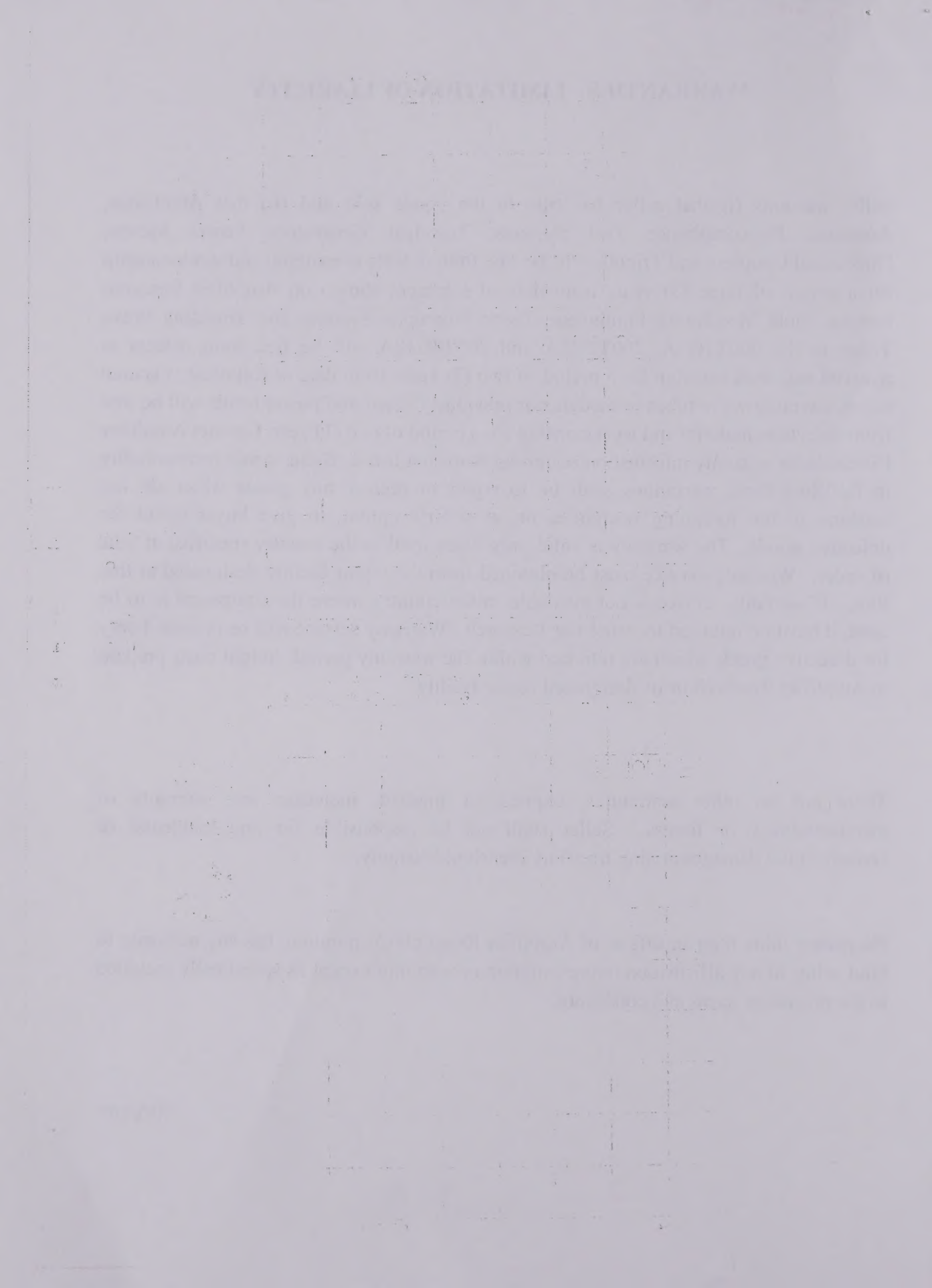
DWG. NO.		
1012876-101		
SCALE 1/1	SHEET 3 OF 3	REV. A

WARRANTIES: LIMITATION OF LIABILITY

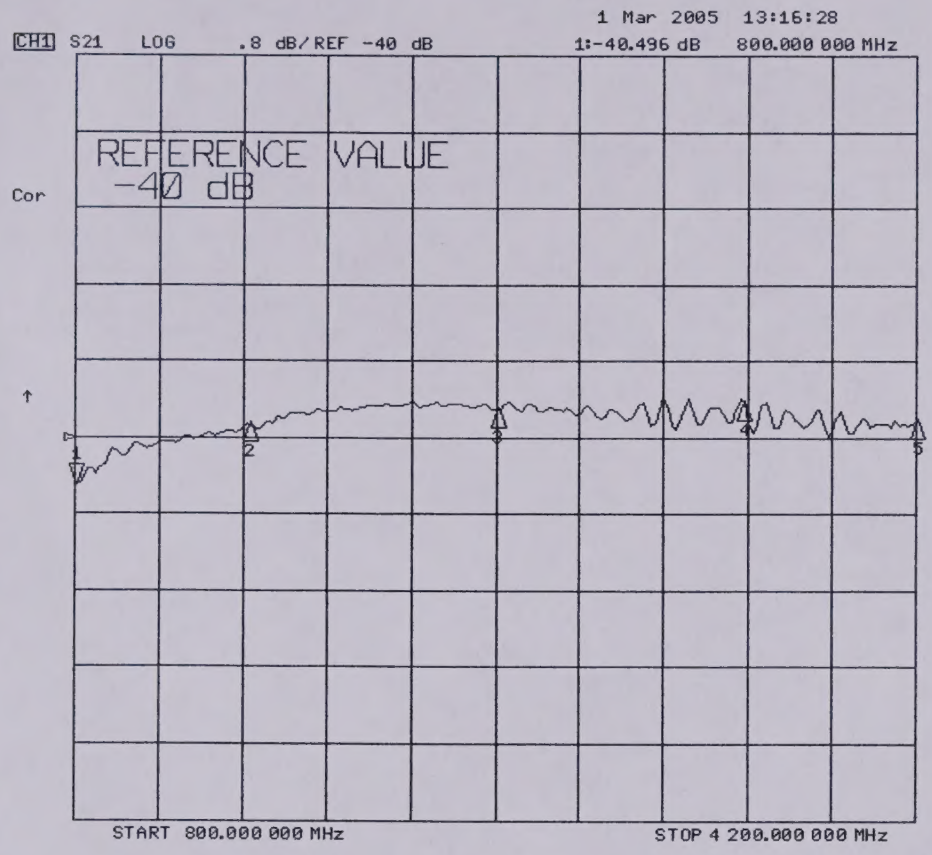
Seller warrants (i) that seller has title to the goods sold and (ii) that Amplifiers, Antennas, Pre-compliance Test Systems, Transient Generators, Power Meters, Directional Couplers and Tripods will be free from defects in material and workmanship for a period of three (3) years from date of shipment shown on Amplifier Research invoice. Field Monitoring Equipment, Teseo Fiberoptic Systems and Traveling Wave Tubes in the 200T1G3A, 200T2G8A and 200T8G18A will be free from defects in material and workmanship for a period of two (2) years from date of shipment. Vacuum tubes, traveling-wave tubes in models not previously listed and power heads will be free from defects in material and workmanship for a period of one (1) year. Contact Amplifier Research for warranty information regarding items not listed. Seller's sole responsibility in fulfilling these warranties shall be to repair or replace any goods which do not conform to the foregoing warranties or, at seller's option, to give buyer credit for defective goods. The warranty is valid only when used in the country specified at time of order. Warranty service must be obtained from the repair facility designated at that time. If warranty service is not available in the country where the equipment is to be used, it must be returned to Amplifier Research. Warranty service will be provided only for defective goods which are returned within the warranty period, freight costs prepaid to Amplifier Research or its designated repair facility.

There are no other warranties, express or implied, including any warranty of merchantability or fitness. Seller shall not be responsible for any incidental or consequential damages arising from any breach of warranty.

No person other than an officer of Amplifier Research Corporation, has any authority to bind seller to any affirmation, representation or warranty except as specifically included in the preceding terms and conditions.



FLATNESS - S1 & S2 ±0.8 dB

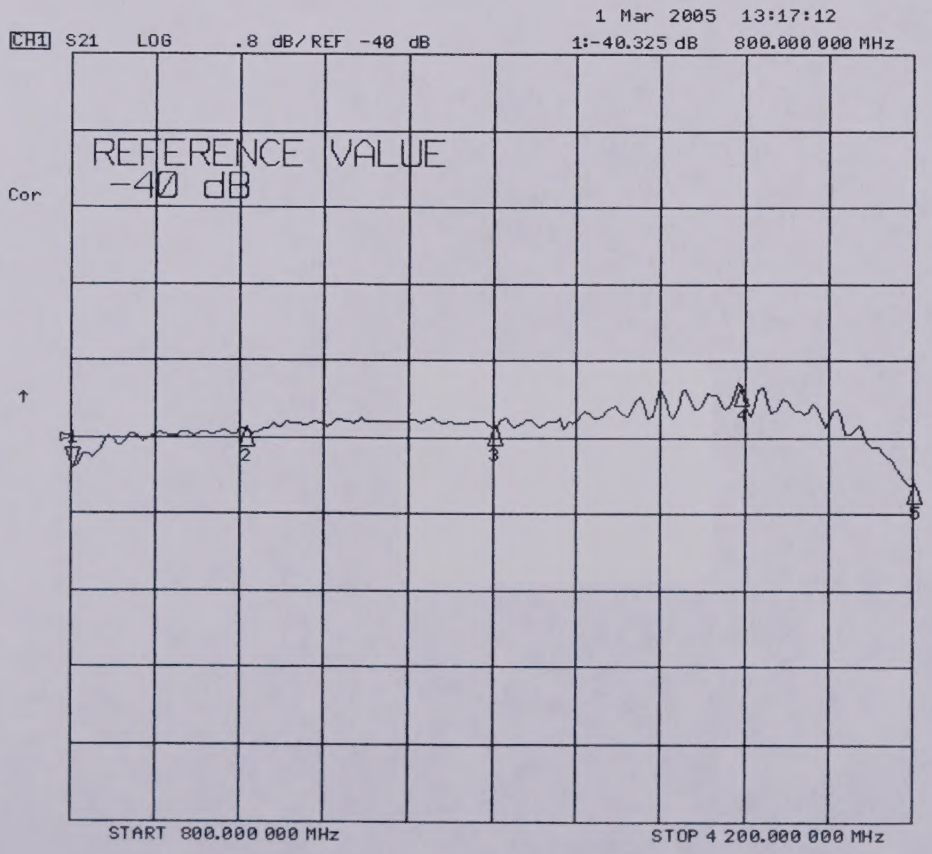


CH1 Markers
2:-39.863 dB
1.50000 GHz
3:-39.708 dB
2.50000 GHz
4:-39.624 dB
3.50000 GHz
5:-39.812 dB
4.20000 GHz

Coupled Port

J1 - J3

Model:
1012876-501
Serial No:
311379
Tested By:
JK



CH1 Markers
2:-39.917 dB
1.50000 GHz
3:-39.902 dB
2.50000 GHz
4:-39.478 dB
3.50000 GHz
5:-40.494 dB
4.20000 GHz

Coupled Port

J2 - J4

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